What is claimed is:

1. A wheel support bearing assembly for rotatably supporting a wheel relative to an automotive body structure, said bearing assembly comprising:

an outer member having an inner peripheral surface formed with plural rows of raceways;

an inner member having raceways defined therein in face-to-face relation with the raceways in the outer member;

plural rows of rolling elements accommodated between the raceways in the outer and inner members;

an electric generator for generating an electric power as one of the outer and inner members rotates relative to the other of the outer and inner members; and

a wireless transmitting means for transmitting wireless a signal indicative of a number of revolutions of the wheel that is outputted from the electric generator.

2. The wheel support bearing assembly as claimed in Claim 1, wherein one of the outer and inner members is provided with a wheel mounting flange.

3. The wheel support bearing assembly as claimed in Claim 1, wherein one of the outer and inner members is provided with a vehicle body fitting flange.

4. The wheel support bearing assembly as claimed in Claims 1, wherein the electric generator comprises a ring member made of a magnetic material and accommodating a coil therein, and a multi-pole magnet and wherein the ring member is mounted on one of the outer and inner members and the multi-pole magnet is mounted on the other of the outer and inner members.

5. The wheel support bearing assembly as claimed in

Claim 4, wherein the ring member and the multi-pole magnet are arranged between the plural rows of the raceways formed in the outer and inner members.

6. The wheel support bearing assembly as claimed in Claim 4, wherein at least one of the ring member and the multi-pole magnet is formed integrally with a sealing member for sealing an open end between the outer and inner members.

7. The wheel support bearing assembly as claimed in Claim 6, further comprising a sealing member for preventing an ingress of foreign matter into a gap between the ring member and the multi-pole magnet.

8. The wheel support bearing assembly as claimed in Claim 4, wherein the ring member has a sectional shape similar to a groove shape or a shape of a figure "C" and includes a casing portion, in which the coil is accommodated and which has opposite side edges, and a plurality of comb-shaped prongs extending outwardly from each of the opposite side edges of the casing portion, and wherein the prongs extending outwardly from the respective side edges of the casing portion are alternately interleaved with each other in a direction circumferentially thereof.

9. The wheel support bearing assembly as claimed in Claim 8, wherein the prongs extending outwardly from the respective side edges of the casing portion are interleaved with each other and alternate one after another in a direction circumferentially of the ring member with a gap defined between one of the prongs extending from one of the respective side edges and the neighboring one of the prongs extending from the other of the respective side edges.

10. The wheel support bearing assembly as claimed in Claim 8, wherein each of the comb-shaped prongs in the ring member

has a width progressively decreasing in a direction towards a free end of the respective prong.

11. The wheel support bearing assembly as claimed in Claim 4, wherein the ring member made of the magnetic material and accommodating the coil of the electric generator includes an annular magnetic pole portion coaxial therewith, in which magnetic poles of different polarities alternate one after another in a direction circumferentially thereof, and further comprising a second multi-pole magnets, the first and second mentioned multi-pole magnet being disposed on respective sides of the magnetic pole portion of the ring member.

12. The wheel support bearing assembly as claimed in Claim 1, wherein the transmitting means includes an annular transmitter.

13. The wheel support bearing assembly as claimed in Claim 4, wherein the transmitting means includes an annular transmitter, said annular transmitter being integrated together with the ring member forming a part of the electric generator.

14. The wheel support bearing assembly as claimed in Claim 6, wherein the ring member and the transmitter are arranged so as to overlap with each other in a direction radially of the ring member.

15. The wheel support bearing assembly as claimed in Claim 6, wherein the transmitting means includes an annular transmitter, said annular transmitter being integrated together with the ring member, said ring member being fitted to an end portion of the inner member, and further comprising a sealing member for sealing an open end between the inner and outer members, said sealing member being fitted to the outer member so as to be held in

contact with an outer periphery of the ring member.

16. The wheel support bearing assembly as claimed in Claim 6, wherein the transmitting means includes an annular transmitter, said annular transmitter being integrated together with the ring member, and wherein the multi-pole magnet is formed integrally with a sealing member for sealing an open end between the outer and inner members, and wherein two components made up of an assembly including the transmitter and the ring member and an assembly including the multi-pole magnet and the sealing member are used to seal the open end.

17. An anti-skid braking device for, by detecting a rotational speed of a wheel rotatably supported by an automotive body structure by means of a wheel support bearing assembly as set forth in Claim 1, controlling a braking force in response to a detection signal indicative of the rotational speed of the wheel, said anti-skid braking device comprising:

a pulsar ring mounted on a rotary member of a wheel, which serves as the inner member, and constituting a part of the electric generator;

a sensor mounted on a wheel support member in face-to-face relation with the pulsar ring and forming another part of the electric generator;

a wireless transmitting means including a transmitting means installed on the wheel support member, and a receiving means installed on the automotive body structure, said transmitting means being operable to transmit a signal from the sensor by means of a feeble radio wave, said receiving means receiving the feeble radio wave to detect a sensor output signal and a radio field strength signal; and

a controller installed on the automotive body structure for determining a control of a braking force in dependence on the sensor output signal and the radio field strength signal.

18. The anti-skid braking device as claimed in Claim 17, wherein the controller controls not to perform an anti-skid braking operation unless a predetermined condition is satisfied in dependence on the sensor output signal and the radio field strength signal.

19. The anti-skid braking device as claimed in Claim 17, wherein the controller determines the control in reference to a voltage of a duplex signal in which the sensor output signal and the radio field strength signal are duplexed.

20. The anti-skid braking device as claimed in Claim 17, wherein the transmitting means transmits the feeble radio wave by frequency modulating the sensor output signal, and the receiving means detects the sensor output signal and the radio field strength signal by demodulating the feeble radio wave.

21. The anti-skid braking device as claimed in Claim 17, wherein the controller includes a software program describing procedures to determine the control of the braking force in dependence on the sensor output signal and the radio field strength signal, and a computer capable of executing the software program.

22. The anti-skid braking device as claimed in Claim 17, wherein the pulsar ring is mounted on a rotation side bearing member of the bearing assembly supporting the wheel rotatably, and the sensor is mounted on a stationary side bearing member of the bearing assembly.

23. A method of controlling an anti-skid braking device for, by detecting a rotational speed of a wheel rotatably supported by an automotive body structure by means of a wheel support bearing

assembly as set forth in Claim 1, controlling a braking force in response to a detection signal indicative of the rotational speed of the wheel, said method comprising:

a step of detecting a rotational speed of the wheel by means of a pulsar ring mounted on a rotary member of a wheel, which serves as the inner member, and constituting a part of the electric generator, and a sensor mounted on a wheel support member in face-to-face relation with the pulsar ring and forming another part of the electric generator;

a wireless transmitting step of causing the transmitting means, installed on the wheel support member, to transmit a feeble radio wave as a sensor output signal outputted from the sensor, causing the receiving means, installed on the automotive body structure, to receive the feeble radio signal to thereby detect the sensor output signal and a radio field strength signal;

a step of determining, by means of a controller installed on the automotive body structure, a control of a braking force in dependence on the sensor output signal and the radio field strength signal.